

Work Order ID 86877-1

86877

Page 1

July-09-12 9:13:07 AM

Item ID: D2855-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Cap

Start Date: 7/09/12

Start Qty: 10.00

10

Cust Item ID:

Required Date: 7/20/12

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date: 12-07-10

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2855

Rev B

100

0.00

100

Purchasing

PURCHASING

Memo

0.00

Purchasing

Issue P/O:

Cast per Dwg D2855

Material Release Note Required

110

0.00

110

Packaging

Receive & Inspect for Damage & Mat'l Certs

Memo

0.00

Packaging

Ensure Material Release Note is attached

120

0.00

120

QC

QC6- Inspect dimensions to drawing

Memo

0.00

Quality Control

Split

10
10

12-07-10

17404

DAS

12/4/10

12-07-10

12-07-10

50X

12-7-18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86877

86877

Page 2

July-09-12 9:13:07 AM

Item ID: D2855-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Cap

Start Date: 7/09/12

Start Qty: 10.00

10

Cust Item ID:

Required Date: 7/20/12

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

Small Fab

Small Fab

Small Fab

Memo

1- Drill as per Dwg D2855 using DT8235
2- Open holes to 19/64"
3- Cut to length as per dwg
4- Deburr

0.00

0.00

140

140

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

150

150

Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

0.00

M121841

2'-15
320 OF
2'-45

12-09-11

(40 pulled on

D28 55 W 12-09-07
(WP 89802)

Sms

12-9-11

DAS
16
2-55

17/04/11

50

φ

Ae

12.07.30
88 12.08-16

10

10

10 X φ

M/L

12/09/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86877

86877

Page 3

July-09-12 9:13:07 AM

Item ID: D2855-3

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cap

Start Date: 7/09/12

Start Qty: 10.00

10

Cust Item ID:

Required Date: 7/20/12

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.00

Quality Control

10x d HU 12/09/13

170

Small Fab

0.00

170

Small Fab

Memo

0.00

Small Fab

✓ Install Inserts as per Dwg D2855

10x d HU 12/09/13

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

Quality Control

10 d BR 12-9-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86877

86877

Page 4

July-09-12 9:13:07 AM

Item ID: D2855-3 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Cap
 Start Date: 7/09/12 Start Qty: 10.00 *10* Cust Item ID:
 Required Date: 7/20/12 Req'd Qty: 10.00 *10* Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Identify as per dwg & Stock Location: <u>FP-2</u>	0.00							
190									
Packaging	Memo	0.00							
Packaging									
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.00							
Quality Control									

x10 d M nloc13

12/9/13 JF

12-09-13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

July-09-12 9:13:07 AM

Page 1

Work Order ID: 86877

Parent Item: D2855-3

Parent Item Name: Cap

Start Date: 7/09/12

Required Date: 7/20/12

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS7-1032-225 INSERT		Purchased	No			170	Each	3,370.0000	2	44 20		12/09/13	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP-B		2452							
				122290		2452				x20			
				ST282		918							
				100896		135							
				111529		27							
				118520		756							
D2855P Cap		Purchased	No			110	Each	100.0000	1	10 110			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST		100							
				84952		100							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SHOP COPY

RETURNED

ENGINEER

UNCONTROLLED COPY

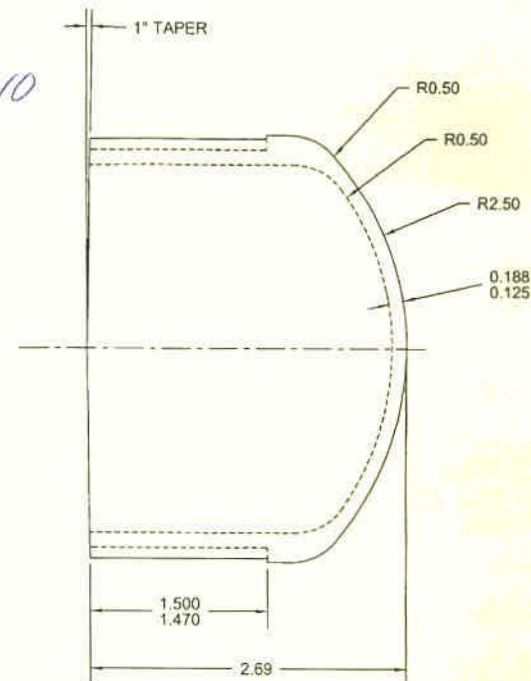
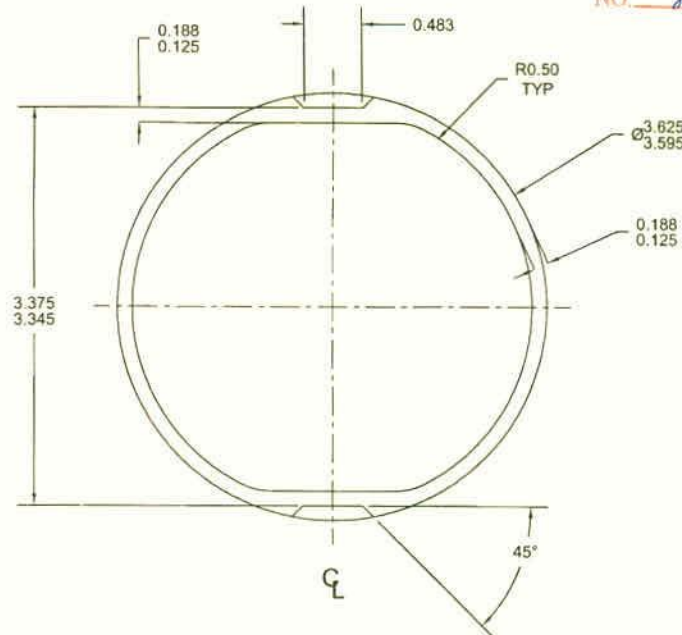
SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER

NO. 84877

12-07-10



D2855C CASTING DETAIL



RELEASED
09/07/15 MB

NOTES:

- 1) MATERIAL: CASTING ALUMINUM ALLOY A356.2 (F)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.62 lbs

B	DRAWING UPDATED TO CURRENT STANDARDS. ADD D2855-3 & D2855C (ZN A4-1, A4-3)	RF	09.06.30
A	NEW ISSUE (WAS D2575 REV. E)	DS	96.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D2855	SHEET 1 OF 3
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	CAP	NTS
DATE	09.06.30	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Dart Aerospace Ltd

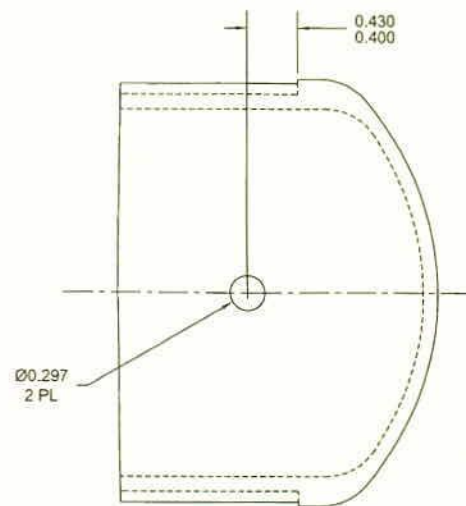
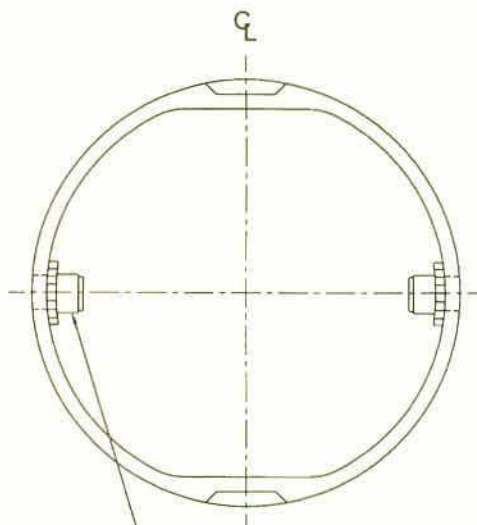
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

86877



INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR
ALS7-1032-225, OR AKS4-1032-225) INSERT ON
INSIDE OF CAP (AFTER POWDER COAT)
2 PL

D2855 CAP
(MAKE FROM D2855C CASTING)

RELEASED
21/15 MB

NOTES:

- 1) MATERIAL: MAKE FROM D2855C
- 2) FINISH: POKER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.63 lbs

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D2855	SHEET 2 OF 3
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	CAP	NTS
DATE	09.06.30	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR DISCLOSED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

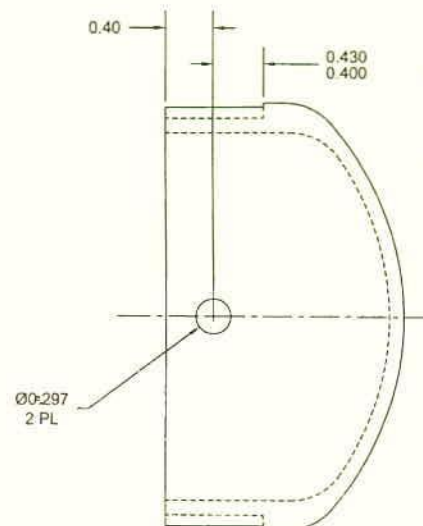
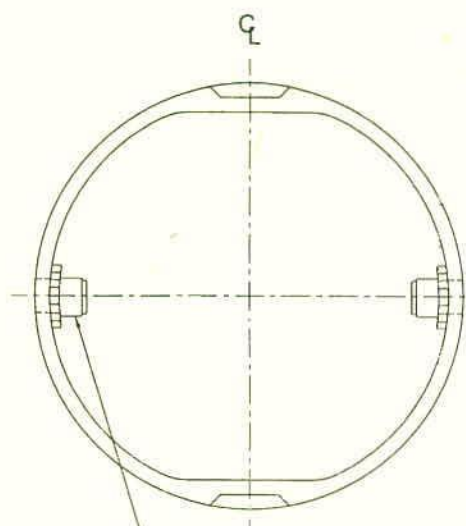
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries







INSTALL ALS4-1032-225 (OR AKS7-1032-225, OR
ALS7-1032-225, OR AKS4-1032-225) INSERT ON
INSIDE OF CAP (AFTER POWDER COAT)
2 PL

D2855-3 CAP 
(MAKE FROM D2855C CASTING)

NOTES:

- 1) MATERIAL: MAKE FROM D2855C OR D2855
- 2) FINISH: POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.50 lbs

DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D2855	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		CAP	NTS
DATE	09.06.30	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR EXPOSED OR DISCLOSED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

RELEASED


56577

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO17404

Purchase Order Date 7/10/2012

PO Print Date 7/10/2012

Page Number 1 of 1

Order From : VC-ALU001

ALUMINUM FOUNDRY & PATTERN WORKS LTD.
2225 CHEMIN ST. FRANCOIS
DORVAL, QC H9P 1K3
CA

Contact Name
Vendor Phone 514 683 9777
Vendor Fax 514 683 0375
Vendor Account Nbr

Buyer Brigitte Golden
Requisition Nbr
Tax Resale Nbr 10127-2607
Terms Net 30
Currency CAD
FOB Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED
7/2/12

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
D2855P		Cap	7/27/2012 Yes	50.00 Each	FedEx PI collect	\$18.7000	\$935.00

Special Inst: As per DWG: D2855 Rev B
B86877
MAT: A356.2(F)

PO Total: \$935.00

MATERIAL CERTIFICATION
REQ'D UPON DELIVERY

Change Nbr: 2

Change Date: 7/10/2012

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required ☒ YES ☐ NO

Brigitte Golden

From: Brigitte Golden <bgolden@dartaero.com>
Sent: Tuesday, July 10, 2012 2:23 PM
To: 'Aluminum Foundry'
Cc: clavoie@dartaero.com; L Lacelle (llacelle@dartaero.com)
Subject: RE: New PO17404 from Dart
Attachments: PO17404 Aluminum Foundry.pdf

Thank you

Please find attached the revised PO

Also I have changed the date, but keep trying for July 16th...

Regards

Brigitte Golden

From: Aluminum Foundry [<mailto:info@foundryafpw.com>]
Sent: Tuesday, July 10, 2012 2:19 PM
To: 'Brigitte Golden'
Subject: RE: New PO17404 from Dart

Good afternoon!

There is a minimum 50 pcs order to avoid the surcharge of \$150.00. Please let us know how you want to proceed.

Our standard delivery time is 3 to 4 weeks. We will try our best but we cannot guarantee delivery 16th of July.

Thank you,

Roxana Dima
Aluminum Foundry & Pattern Works Ltd.
2225 Chemin St. Francois, Dorval, QC, H9P 1K3
Tel. (514) 683 9777
Fax (514) 683 0375

From: Brigitte Golden [<mailto:bgolden@dartaero.com>]
Sent: Tuesday, July 10, 2012 1:24 PM
To: 'info'
Cc: clavoie@dartaero.com; L Lacelle
Subject: RE: New PO17404 from Dart
Importance: High

Good Afternoon!

Please confirm on this new PO attached.

Regards

Brigitte Golden

Document Control

DART AEROSPACE Ltd.

7 CERTIFICAT DE CONFORMITE
CERTIFICATE OF COMPLIANCE

FONDERIE D'ALUMINIUM ET MODELERIE (1988) LTEE
ALUMINUM FOUNDRY & PATTERN WORKS (1988) LTD

2225 CHEMIN ST. FRANCOIS, DORVAL, QC H9P-1K3
TEL (514) 683-9777 FAX: (514) 683-0375

Expédié à
Shipped

DART AEROSPACE

N.F. & P.W. Série no./Serial no

1270 Aberdeen Street

Date 15/07/2012 Packing Slip No 34093, 34094

Hawksbury, ON, K6A 1K7

Votre No. Commande 17343 17404
Your order No.

Ceci est pour certifier que le matériel liste ci-dessous est selon les spécifications du bon d'achat ci-haut, et que les documents en évidence des rapports et certificats de détaillants sont en file dans notre bureau.

This is to certify that the material listed below is according to your specifications on above P.O. and that documentary evidence of the tests or release certificates from the original supplier are on file in this office.

Quantité Quantity	Description	Notre No. Our No.	Spécifications Specifications	Note d'autorisation Incoming Release note
60	D 2855 CAP	Z098046	A356.2	B# 1219401
50	D 2855 CAP	Z098046	A356.2	B# 1219401

Analyse
Analysis (as in ingot C - 626 1819)

(Si)	7.1%	(Al)	balance
(Fe)	0.10%		
(Cu)	<0.01%		
(Mn)	<0.01%		
(Mg)	0.38%		
(Zn)	<0.01%		
(Ti)	0.12%		

Donnée
Yield :

Résistance à la tension :
Tensile Strength :

Allongement par pouce carré :
P.S.I. Elongation :

Pour et au nom de
For and on behalf of :

FONDERIE D'ALUMINIUM ET MODELERIE (1988) LTEE
ALUMINUM FOUNDRY & PATTERN WORKS (1988) LTD

Dept/Dep :
Par/Per :

Coc-100

